

Abstract

A laser imaging system with reduced speckle is disclosed. The laser imaging system includes spatially superpositioned 1-D arrays or alternatively 2-D arrays of independent emitters of laser radiation, with each emitter having a spectral bandwidth  $\Delta\lambda_i$  centered at some arbitrary wavelength  $\lambda_{0i}$ . The elements of the array are allowed, by design, to have a slightly different central wavelength, thereby creating an ensemble bandwidth  $\Delta\Lambda$  which is much greater than the bandwidth  $\Delta\lambda_i$  of any individual emitter in the array. The resulting increased bandwidth reduces speckle in a displayed image.